

Application Serial No. 10/583,881
Reply to Office Action of June 8, 2009

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PATENT
Docket: CU-4891

OCT 08 2009

Amendments to the Claims

The listing of claims presented below replaces all prior versions, and listings, of claims in the application.

Applicant wishes to make the following amendments to the claims of the above patent application:

Listing of Claims

1. (currently amended) A method of recovering a base paper for gypsum board, which is configured to recover a base paper for gypsum board from a waste material of gypsum board comprising a gypsum core and the base paper for gypsum board adhering thereto, comprising the steps of
 breaking the waste material of gypsum board,
 separating a gypsum component and a paper piece of the base paper for gypsum board from the broken waste material of gypsum board, and
 washing the separated paper piece with water in a rotary drum-type washing device so as to eliminate a gypsum component adhering to the paper piece from the paper piece, and further comprising a step of
 previously dispersing or mixing the separated paper piece into a portion of washing water before the separated paper piece is introduced to the rotary drum-type washing device,
 wherein the rotary drum-type washing device comprises a paper piece inlet at one end of rotatably lying air and water through-flow drum and a paper piece outlet at the other end thereof and is capable of supplying washing water to a paper piece in the air and water through-flow drum.
2. (previously presented) The method of recovering a base paper for gypsum board as claimed in claim 1 further comprising a step of burning the broken waste material of gypsum board or the separated paper piece, wherein the burning step is provided before the water washing step.
3. (previously presented) The method of recovering a base paper for gypsum board as claimed in claim 1 further comprising a step of dewatering the water-washed paper

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piece.

4. (canceled)
5. (original) The method of recovering a base paper for gypsum board as claimed in claim 1, wherein the ratio of a weight of the separated paper piece to a weight of fresh water in the washing water is in the range of 1: 5 – 1: 100.
6. (previously presented) The method of recovering a base paper for gypsum board as claimed in claim 1, wherein, in the step of previously dispersing or mixing the separated paper piece into a portion of washing water, a ratio of a weight of the separated paper piece to a weight of the portion of washing water is in a range of 1: 1 – 1: 15.
7. (previously presented) The method of recovering a base paper for gypsum board as claimed in claim 3, wherein the step of dewatering the paper piece comprises squeezing and dewatering of the water-washed paper piece.
8. (currently amended) An apparatus of recovering a base paper for gypsum board, comprising
 - a device configured to break a waste material of gypsum board,
 - a device configured to separate a burnt gypsum component and a paper piece from the broken waste material of gypsum board,
 - a rotary drum-type washing device configured to wash the separated paper piece with water so as to eliminate a burnt gypsum component adhering to the paper piece from the paper piece, and
 - a device configured to dewater the water-washed paper piece, and further having
 - a device configured to disperse or mix the separated paper piece into water before washing the separated paper piece with water,
 - wherein the rotary drum-type washing device comprises a paper piece inlet at

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one end of rotatably lying air and water through-flow drum and a paper piece outlet at the other end thereof and is capable of supplying washing water to a paper piece in the air and water through-flow drum.

9. (previously presented) The apparatus of recovering a base paper for gypsum board as claimed in claim 8, further comprising a device configured to burn the broken waste material of gypsum board.
10. (canceled)
11. (previously presented) The apparatus of recovering a base paper for gypsum board as claimed in claim 8, wherein the dewatering device is a device configured to squeeze and dewater the water-washed paper piece.
12. (new) The method of recovering a base paper for gypsum board as claimed in claim 1, wherein the rotary drum type washing device is capable of discharging washing water containing a gypsum component eliminated from the paper piece toward an outside of the drum through a peripheral wall of the drum.
13. (new) The apparatus of recovering a base paper for gypsum board as claimed in claim 8, wherein the rotary drum-type washing device is capable of discharging washing water containing a gypsum component eliminated from the paper piece toward an outside of the drum through a peripheral wall of the drum.